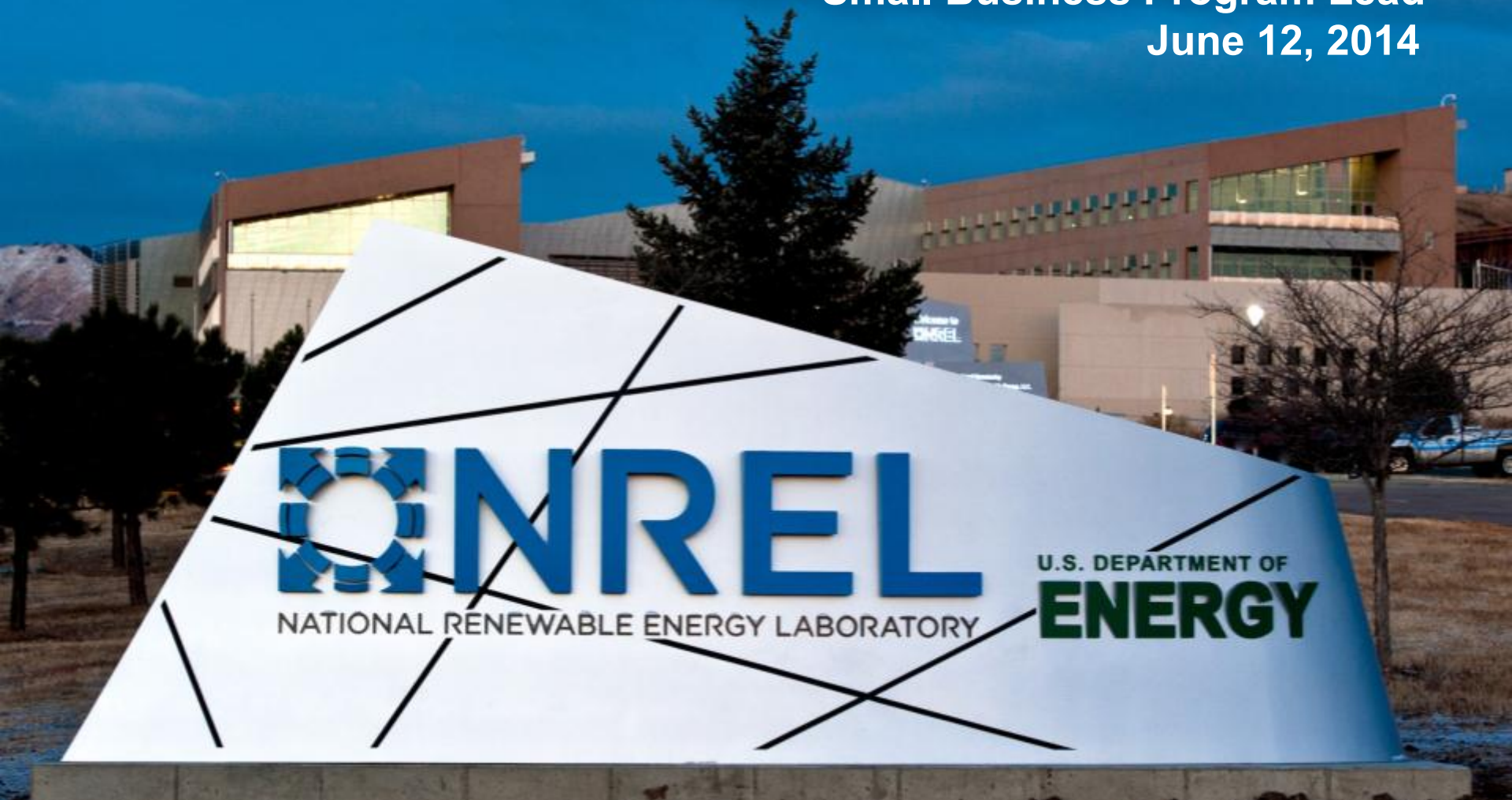


# Generating Success: DOE's Mentor-Protégé Program

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Small Business Program Lead

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# Overview

- **National Renewable Energy Laboratory (NREL)**
- **Small Business Program**
- **Mentor-Protégé Program**
  - NREL's MPP Model
  - Best Practices and Challenges
  - Successes

# About NREL



Aerial photo of the South Table Mountain Campus (STM)

- Managed and Operated by the Alliance for Sustainable Energy LLC (“Alliance”)
- Started as Solar Energy Research Institute (SERI) in 1977
- Designated a National Laboratory in 1991
- Main campus – Golden, Colorado, and satellite National Wind Technology Center near Boulder



Aerial photo of the National Wind Technology Center (NWTC)

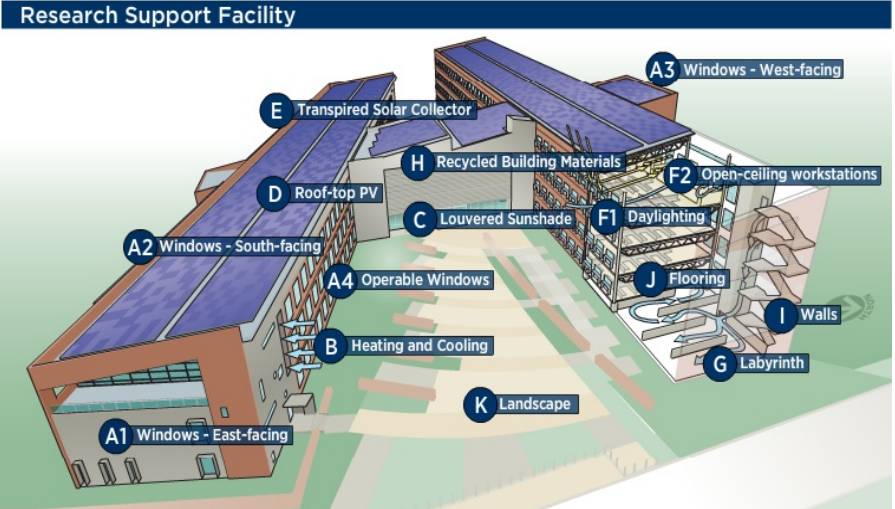
- NREL is the only federal laboratory dedicated to renewable energy and energy efficiency technologies
  - Research
  - Development
  - Commercialization and Deployment
- Backed by 37 years of achievement, NREL pioneers innovation to meet the growing demand for clean energy



# About NREL



Front view of the Research Support Facility (RSF) from the bus stop



Detailed LEED Platinum RSF Diagram

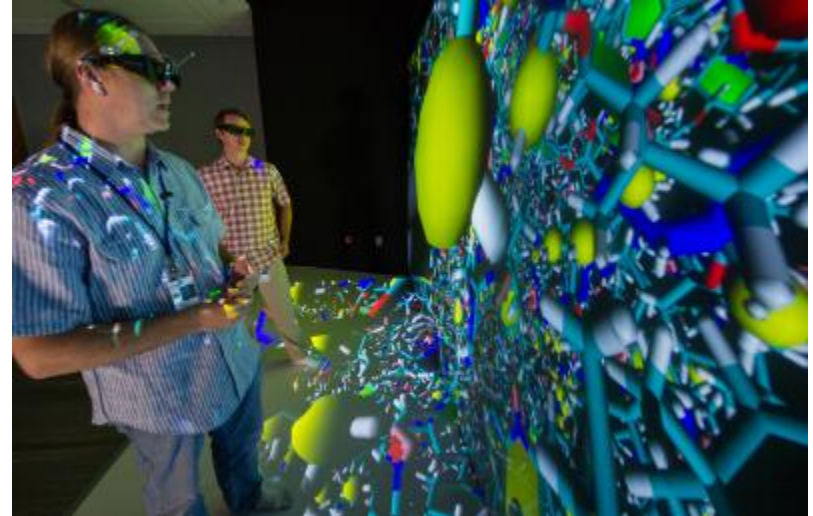
- **360,000 ft<sup>2</sup>**
- **LEED Platinum**
- **Net-zero energy**
- **1,325 occupants**

- **40 prestigious awards**
  - **Architectural**
  - **Construction**
  - **Engineering**
  - **Sustainability and Environmental**

# About NREL



Exterior view looking northeast of the Energy Systems Integration Facility (ESIF)



ESIF Visualization Lab-Molecular Model for Battery Storage

- **182,500 sq<sup>2</sup>**
- **LEED Platinum**
- **R&D Magazine's 2014 laboratory of the year**
- **205 occupants**

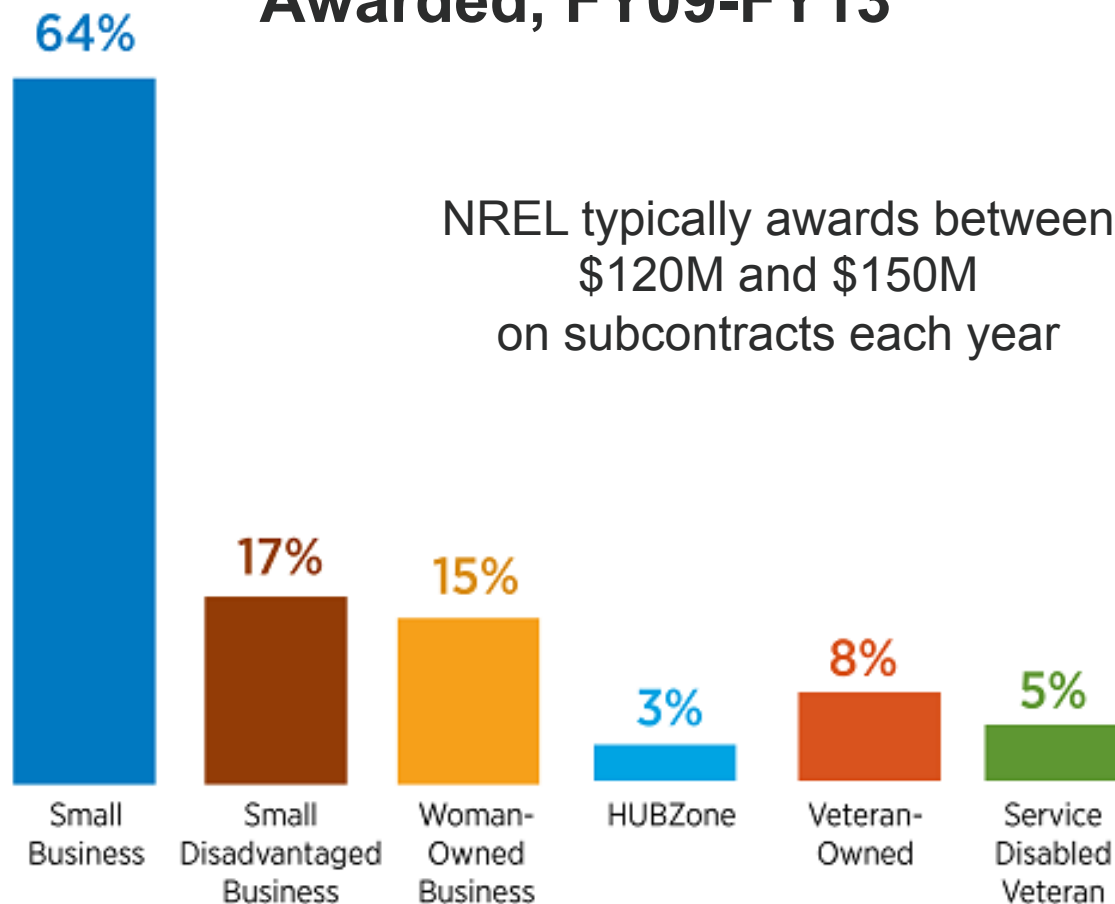
- **15 laboratories**
  - **Electricity**
  - **Thermal systems**
  - **Fuel**
  - **Data and analysis**
  - **Insight visualization**

# Small Business Program

- **SB Program is located in the Strategic Program & Partnerships Directorate**
  - **Innovation and Entrepreneurship Center (IEC)**
    - **Small Business Program**
      - **Mentor-Protégé Program**
    - **NREL Commercialization Assistance Program (NCAP)** – apply to receive up to 40 hours of free technical assistance from a researcher
    - **Industry Growth Forum (IGF)** – hosted annually in Denver providing clean energy entrepreneurs an opportunity to present their business cases to an panel of experts
  - **NREL's commitment to small business is central to our mission**
    - **SB Program works closely with Contracts and Business Services**
    - **Purchase lab equipment supplies, office furnishings and supplies; and technical consulting, temporary staffing, and construction services**
    - **Annual SB goals**

# Small Business Program

## Average Percent of Subcontract Dollars Awarded, FY09-FY13



# Mentor-Protégé Program

- **NREL's MPP began in 2008 with a goal of placing seven mentor protégé agreements in five years**
  - **Capabilities**
    - Video production
    - Energy modeling
    - Communications
    - E-learning
    - Construction
- **Small Business Program drives the Mentor-Protégé Program**
  - Internal education
  - We find the internal champion and protégé candidate
  - Monitor progress closely throughout the agreement period
  - Help facilitate mentoring



# Mentor-Protégé Program

- **Business Skills**

- Contract Negotiations
- Improving Safety Programs
- Quality Assurance Plans
- Business Development
- Pricing and Cost Proposal
- Oversight of Subcontractors
- Cost Breakdown
- Accounting Practices

- **Technical Skills**

- Building Energy Efficiency Audits
- Monitor Solar Thermal Hot Water Systems
- Design and install different types of data acquisition systems to monitor the performance of a new technology
- Energy Technology Development

# Mentor-Protégé Program

- **Best Practices**

- Mentor
  - Internal education
  - Mentor & Protégé selection
  - Stakeholder meeting
  - Kick off meeting
  - Actively monitor
- Protégé
  - Build relationships
  - Stay actively engaged
    - Communicate
    - Be proactive

- **Challenges**

- Mentor
  - Ratios
  - Finding the right fit
  - Funding
  - Time constraints
- Protégé
  - Ratios
  - Selection process
  - Obtaining a contract
  - Time constraints

# Successes

## St. Andrews Construction - SDB

- Piloted a new NREL safety/health manual for long-term campus projects and provided key input for the final product
- Helped develop the complex lock out/tag out procedures at the Field Test Laboratory Building on the NREL campus
- Instrumental in creating the final policy that the lab uses today

“This has been a win-win relationship for the lab and for St. Andrews. St. Andrews was able to share what they knew from other agencies, which helped NREL evolve”  
John Boysen, NREL Technical Monitor



# Successes

## Fireside Production – WOSB

- Producing over 27 videos through MP Program
- Building strong relationships with multiple NREL program managers supporting several DOE programs and capabilities
  - DOE Clean Cities — Reducing Petroleum use in nearly 100 cities
    - Filming of Clean Cities 20<sup>th</sup> Anniversary event
    - Broad video and media training project for Clean Cities coordinators in 2014
  - Energy Systems Integration Facility (ESIF)
    - Video — posted on NREL's YouTube channel — highlights the state-of-the-art facility, the capabilities, and the opportunities for partners to work with NREL and DOE



“The relationship with Fireside Production has been a valuable tool for the Clean Cities and NREL and is a great example of coming to the table together as partners, allowing each of us to best utilize our respective skill sets.”

Andrew Hudgins, NREL DOE Clean Cities Project Leader



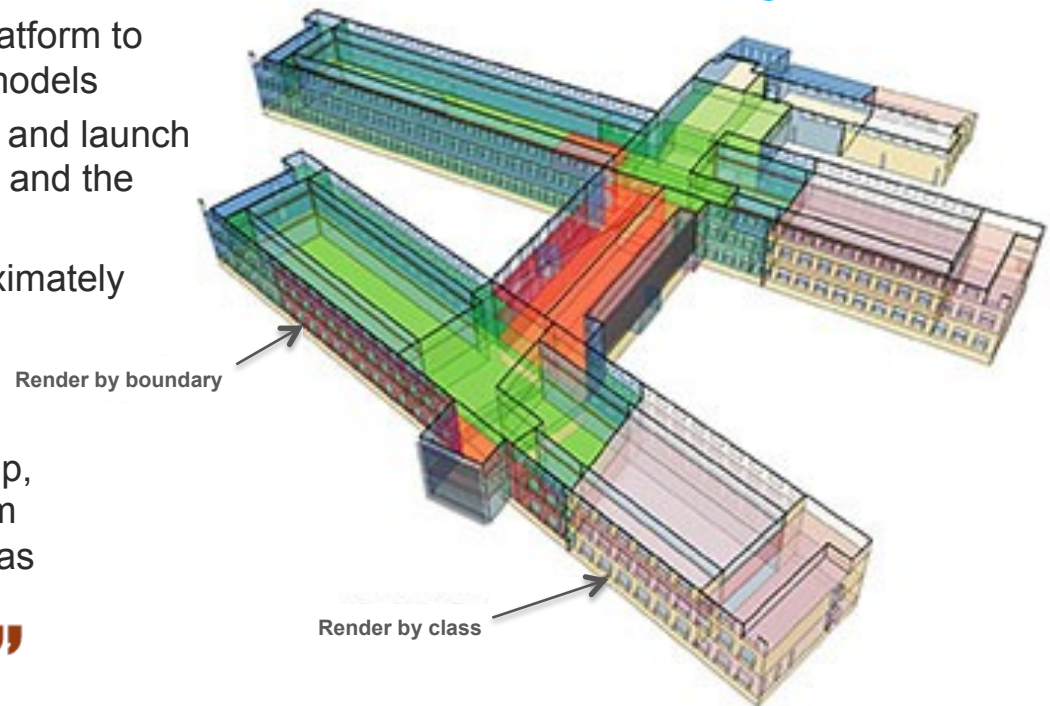
# Successes

## Group14 Engineering, Inc. – WOSB/SDB

- Key to development of DOE's OpenStudio software through NREL MP Program
- OpenStudio is an open source software platform to test, design, measure, and create energy models
- Group14 contributions to the development and launch of OpenStudio benefit the DOE, other labs, and the private sector
- Group14's work saves Xcel Energy approximately \$1,000,000 per year

“During the early part of the mentorship, they were teaching us. Watching them use the tool, we were able to see areas of concern, which gave us critical guidance on how to develop the tool.”

Larry Brackney, NREL Technical Monitor,  
OpenStudio Software Developer/Research Scientist.



The OpenStudio platform creates energy models such as this one of NREL's Research Support Facility.  
Graphic by Nick Long, NREL 18547



# Summary

- **Take Away:**

- Both mentors and protégés need to stay actively engaged
- Protégés need to build those relationships

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# Thank You